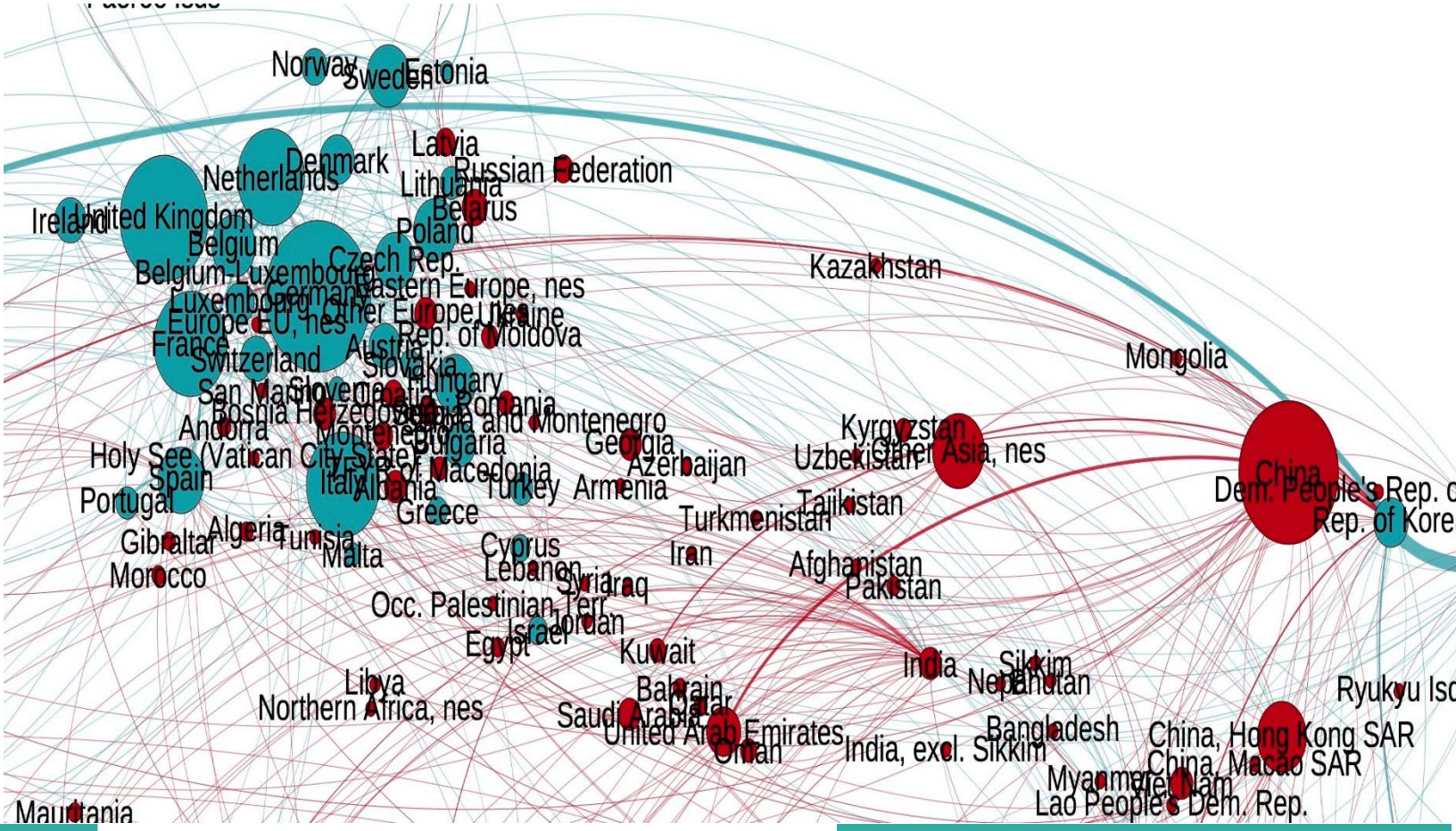
Green Tracking Service Annual Report 2018



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Green Tracking Service

Authored by: Dennis Ward Enterprises LLC

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green tracking service

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Introduction

In January 2019 the Platform for Accelerating the Circular Economy (PACE) and the World Economic Forum (WEF) collaborated to produce the document "A New Circular Vision for Electronics – Time for a Global Reboot." The document outlined that globally, approximately 50 million tonnes of electronic-waste (e-waste) is produced annually. It highlighted that formally, the documented rate of recycling electronic-waste is only 20%. Which leaves 80% of the e-waste streams undocumented and ending up in landfills or developing countries. The Green Tracking Service wants to bring more visibility into these unknown channels to mitigate these outcomes. Its mission is to provide electronic sustainability stakeholders with services, tools, analysis and reports to create a universal digital footprint of e-waste flows. This is just the beginning of such initiatives. But, why does the e-waste problem exists?

Rapid innovation and high volume electronics usage has economically affected the recycling industry. This increase in electronics has lowered the cost of recycled commodities. This deflation of value has affected the cost and ethical practices of recyclers as well. In an effort to save on operational and capital expenses, unethical recyclers in developed countries are shipping electronic waste (e-waste) overseas illegally to developing countries. This is in violation to the Basal Convention (E.g. adopted in 1989). This has led to Original Equipment Manufacturers (OEMs), who employ these recyclers, to suffer negative consequences. This includes negative brand exposure and legal liability problems because their end-of-life products are being found in toxic locations.

In an effort to enable more visibility into their downstream electronic waste (e-waste) channels, in 2018 several ethical recycling industry stakeholder participated in deploying wireless (GPS/GSM) trackers. 170 Green Tracking Service (GTS) trackers were deployed in various locations in the USA. The trackers were inserted in various Covered Electronic Devices (CED) such as laptops, desktop computers, e-plastics and monitors. Below are the findings of these deployments.

Analysis

The Green Tracking Service distributed 170 wireless trackers to recycling industry stakeholders around the United States to get a baseline view of e-waste flows. The distribution of participants covered the West Coast, Midwest and the East Coast. The flows primarily terminated in the USA. However there were some that jumped the borders into developing countries. Surprisingly, 95% of the trackers stayed in the USA and 5% exited the USA. The owners of the 5% of e-waste that left the US were informed. These recyclers were able to investigate and address the issues with the quantifiable data collected from the Green Tracking Service multi-tenanted dashboards.

Figure 1: GTS Tracker Distribution

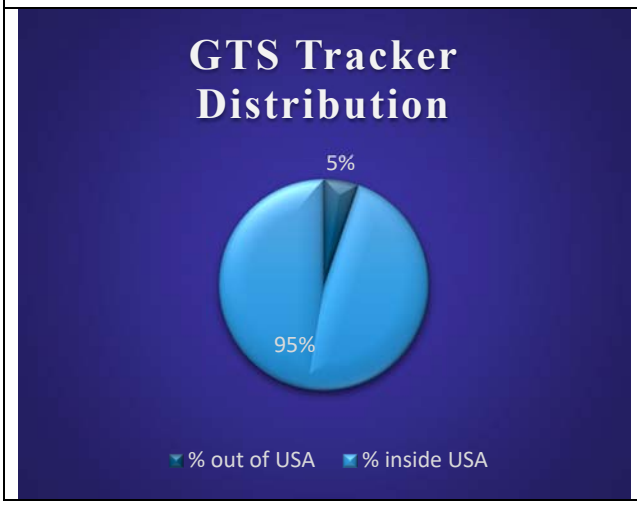

Figure 2: GTS Trackers Leaving the USA

There is a major concern that the Organisation for Economic Cooperation and Development (OECD) countries are still sending e-waste to non-OECD countries. From our findings, out of the 5% of GTS trackers leaving the USA, 89% of the devices entered non-OECD countries and 11% entered OECD countries (Figure 2).

Figure 3: GTS Trackers Entering Non-OECD Countries

Figure 4: GTS Trackers Entering OECD Countries

Out of the 89% entering the non-OECD countries, 50% entered Hong Kong, 25% entered Malaysia, 13% entered Pakistan and 12% entered China (Figure 3). Out of the 13% of devices entering the OECD countries, 100% entered Spain (Figure 4).

Hong Kong had the highest percentage of e-waste flows in our study. The e-waste sighted were laptops. The location was in the New Territories. Malaysia came in second. The e-waste were actually e-scrap plastic. It ended up in Klang and Segamat Malaysia. The third location was in Pakistan. The e-scrap were desktops. It ended up in Karachi, Sindh. The forth location was China. The e-scrap were laptops. The final destination was in Shanghai.

Summary

This study has produced an initial baseline for e-waste flows from the USA throughout the world. Though the sample was quite small, it gives us insight into e-waste flow trends to date. However, the USA is only one OECD country. There are presently thirty-five more OECD countries that have conventions, directives, and laws to regulate the disposal of such e-waste, most based on the extended producer responsibility concept. Manufacturers take back items collected by retailers and local governments for safe destruction or recovery of materials via "take-back" programs. Compliance, however, is difficult to assure, so the Green Tracking Service would like to enhance these present initiatives with needed visibility.

The Green Tracking Service is actively collaborating with OEMs, Governmental and Non-Governmental organizations, Certification bodies, Universities, Tier-1 Recyclers, Haulers and Collectors to expand its e-waste digital footprint. This is done by encouraging these entities to include the service into their existing sustainability programs. We invite sponsors and investors to support this important initiative as well.

Each participant will have their own private dashboard to view their e-waste flows. They will be able to analyze and produce reports from the real-time data collected from the deployed trackers. The more trackers deployed the better the visibility. Since these reports will have the same structure, all stakeholders in the recycling chain can now communicate on the same level with quantifiable data obtained by these flow reports. For example, OEMs can discuss trends with their recycling partners during audits. Tier 1 recyclers as well as their auditors can communicate with downstream vendors concerning processing times, flow locations, Bill Of Lading (BOL) anomalies, etc. Reverse logistics professionals can incorporate the solution into their existing service offerings to their OEM customers to unveil the downstream activity from upstream.

The time is *now* for OEMs and Tier 1 Recyclers to invest in these innovative initiatives toward making the circular economy a reality!

OECD Scoreboard

Table 1:

Non-OECD Countries (Quantity: 155)	OECD Countries (Quantity: 36)
Afghanistan	Australia
Albania	Austria
Algeria	Belgium
American Samoa	Canada
Angola	Chile
Argentina	Czech Republic
Armenia	Denmark
Azerbaijan	Estonia
Bangladesh	Finland
Barbados	France
Belarus	Germany
Belize	Greece
Benin	Hungary
Bhutan	Iceland
Bolivia	Ireland
Bosnia and Herzegovina	Israel
Botswana	Italy
Brazil	Japan
Bulgaria	Korea
Burkina Faso	Latvia
Burundi	Lithuania
Cambodia	Luxembourg
Cameroon	Mexico
Cape Verde	Netherlands
Central African Republic	New Zealand
Chad	Norway
Chile	Poland
China	Portugal
Colombia	Slovak Republic
Comoros	Slovenia
Congo, Democratic	Spain
Republic	Sweden

Congo, Republic	Switzerland
Costa Rica	Turkey
Côte d'Ivoire	United Kingdom
Croatia	United States
Cuba	
Chech Republic	
Djibouti	
Dominica	
Dominican Republic	
Ecuador	
Egypt, Arab Republic	
El Salvador	
Equatorial Guinea	
Eritrea	
Estonia	
Ethiopia	
Fiji	
Gabon	
Gambia	
Georgia	
Ghana	
Grenada	
Guatemala	
Guinea	
Guinea-Bissau	
Guyana	
Haiti	
Honduras	
Hungary	
India	
Indonesia	
Iran, Islamic Republic	
Iraq	
Jamaica	
Jordan	
Kazakhstan	
Kenya	
Kiribati	

Korea, Democratic Republic Kyrgyz Republic Lao PDR Latvia Lebanon Lesotho Liberia Libya Lithuania Macedonia, FYR Madagascar Malawi Malaysia Maldives Mali Marshall Islands Mauritania Mauritius Mayotte Mexico Micronesia, Fed. Sts. Moldova Mongolia Morocco Mozambique Myanmar Namibia Nepal Nicaragua Niger Nigeria Northern Mariana Islands Oman Pakistan Palau Panama Papua New Guinea	

Paraguay Peru Philippines Poland Romania Russian Federation Rwanda Samoa Sao Tome and Principe Senegal Serbia and Montenegro Seychelles Sierra Leone Slovak Republic Solomon Islands Somalia South Africa Sri Lanka St. Kitts and Nevis St. Lucia St. Vincent and the Grenadines Sudan Suriname Swaziland Syrian Arab Republic Tajikistan Tanzania Thailand Timor-Leste Togo Tonga Trinidad and Tobago Tunisia Turkey Turkmenistan Uganda Ukraine	

Uruguay Uzbekistan Vanuatu Venezuela, RB Vietnam West Bank and Gaza Yemen, Republic Zambia Zimbabwe	

About Author: Dennis Ward Enterprises (DWE*) is a digital transformation services consulting firm that specializes in identifying and deploying smart connected solutions to maximize business value. Our deep datacom/telecom/smart industrial experience allows for an insightful yet practical approach to integrating solutions for customers to enhance revenue generating/saving outcomes. Our focus is on Smart Connected Cloud Service Centric solutions that are secure, reliable and safe. Our goal is to assist customers in maintaining sustainable growth year-over-year.*

www.dwecommunications.com
dennis@dwecommunications.com
T: @ward_dennis
O: 408.702.2155
M: 408.888.3989

Green Tracking Service

Provides e-Sustainability stakeholders with *services, tools, analysis and reports to create a universal digital footprint of e-Waste flows. Our solutions are neutral with no dilution of data so stakeholders can trust but verify their downstream channels.*

www.grntrac.com
info@grntrac.com